What is claimed is:

1. A lens barrel comprising:

a lens frame for supporting a photographing lens group, said lens frame including a guide bore which extends in a direction parallel to the optical axis of said photographing lens group;

a support barrel, wherein said lens frame can be inserted into and removed from a front opening of the support barrel;

a rod receiving portion formed inside said support barrel at the rear of said front opening in the optical axis direction;

a bracket detachably attached to a front end of said support barrel to prevent said lens frame from falling out of the front of said support barrel; and

a guide rod provided on said bracket for guiding said lens frame to move relative to said support barrel in the optical axis direction, said guide rod being placed through said guide bores and the end of said guide rods engaging with said rod receiving portion when said bracket is attached to said support barrel;

wherein said lens group frame can be taken out of said support barrel through the front opening when said bracket

having said guide rod is removed from said support barrel.

2. The lens barrel according to claim 1, wherein said lens barrel comprises a plurality of the guide bores, a plurality of the rod receiving portions, and a plurality of the guide rods.

3. The lens barrel according to claim 1, wherein a biasing spring is provided between said bracket and said lens group frame for biasing said lens group frame rearward in the optical axis direction.

4. The lens barrel according to claim 1, wherein said guide rod is removable with respect to said bracket, and is secured to said bracket before said bracket is attached to said support barrel.

5. The lens barrel according to claim 1, further comprising a first sub-lens group provided on the object side and a second sub-lens group provided on the image side with respect to said first sub-lens group, said first and second sub-lens groups functioning optically in a mutually close position and in a mutually distant position in the optical axis direction;

wherein said lens frame, which is guided by said guide rod, constitutes a first sub-lens group frame which supports said first sub-lens group;

wherein said support barrel further supports a second sub-lens group frame, which supports said second sub-lens group, wherein said second lens group frame can be inserted into and taken out of said support barrel through said front opening; and

wherein said first lens group frame and said second lens group frame can be taken out of said support barrel from said front opening in that order, upon removal of said bracket from said support barrel.

6. The lens barrel according to claim 5, further comprising an actuator ring rotatably supported by said support barrel in the rear of said second sub-lens group frame so as not to move in the optical axis direction, said actuator ring being rotated so as to drive said first sub-lens group frame and said second sub-lens group frame with respect to said support barrel;

wherein said second sub-lens group frame is prevented from moving rearward due to said second sub-lens group frame being in contact with said actuator ring; and

wherein said first sub-lens group frame is prevented from moving rearward due to said first sub-lens group frame being in contact with said second sub-lens group frame.

7. The lens barrel according to claim 6, wherein

said second sub-lens group frame is supported in said support barrel so that said second sub-lens group frame can rotate in one and the other direction over a predetermined angle, and said second sub-lens group frame is guided to move in the optical axis direction at each rotational movement extremity thereof;

wherein the rotation of said actuator ring selectively causes said second sub-lens group frame to rotate and to move in the optical axis direction;

wherein the rotation of said second sub-lens group frame causes said first sub-lens group frame and said second sub-lens group frame to move to said mutually close position and to said mutually distant position; and

wherein the movement of said second sub-lens group frame in the optical axis direction causes said first sub-lens group frame to integrally move with said second sub-lens group frame in the optical axis direction.

8. The lens barrel according to claim 7, wherein said first sub-lens group and said second sub-lens group are one of a plurality of variable lens groups of a zoom lens system, wherein the relative position of said first and second sub-lens group frames is switched to said mutually close position and said mutually distant position in the

zooming operation; and

wherein said first and second sub-lens groups serve as a focusing lens group when said first and second sub-lens group frames are integrally moved in the optical axis direction in said mutually close position and in said mutually distant position.

9. The lens barrel according to claim 1, wherein a shutter member which can be selectively opened and closed is provided on said support barrel in the rear of said lens frame.